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ABSTRACT

A study was devised to investigate the possible impact of fictional television violence on children with reference to short and long term effects. Thirty-four children ranging in age from five to six were selected from a sample of children who had seen a series of violent television programs and were divided into two groups according to high and low exposure to the series. The children were shown an additional segment of the program with their mothers either before or after the administration of a series of measures to evaluate comprehension, attitudes, and aggression. The mothers were administered questionnaires and attitude scales to provide information about children's viewing of television and the attitudes of the mother toward television viewing. Results indicated that there were no short term effects of aggression; however, a larger proportion of high-exposed children than low-exposed children displayed more aggressive behavior irrespective of whether they had seen the additional segment on the testing occasion. Subsequent analyses suggest that the manner in which television viewing is handled by the family could be regarded as an intervening variable; therefore, the difference in aggression between low and high exposure groups should not be attributed directly to the television programs. (SH)

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REACTIONS OF CHILDREN TO VIOLENCE ON TV

Olga Linné

CONTENTS

	Page
THEORETICAL BACKGROUND	3
PRACTICAL BACKGROUND OF THE STUDY	7
OBJECT OF THE STUDY	8
DESIGN	10
SAMPLE	11
TESTING METHOD	12
MEASURING INSTRUMENTS	13
Children	13
Mothers	14
FINDINGS	
I AN ATTEMPT TO MEASURE THE FILM'S POSSIBLE SHORT-TERM EFFECTS	16
Aggressiveness	16
Summary	19
II AN ATTEMPT TO MEASURE THE SERIES' POSSIBLE LONG-TERM EFFECTS	20
Aggressiveness	20
Familiarity with the series	23
Ratings	25
Summary	28
III REACTIONS OF THE CHILDREN TO WESTERNS	30
Comprehension of the film	30
TV behaviour	32
Susceptibility to fear	35
Summary	36
IV DEVELOPMENT OF CHILDREN'S TV TASTES; TV HABITS	38
Attitudes of mothers to taste development	38
Children's TV habits	40

Handling the programme 41

Summary 44

V THE FAMILY'S TV HABITS 46

Summary 49

VI MAIN SUMMARY AND DISCUSSION OF THE FINDINGS 50

THEORETICAL BACKGROUND

A great deal of latter-day research has been concerned with the reactions of children to scenes of violence in cinema film and on television. Although most of the studies have been done in the United States, several have been completed in Sweden and more are being planned.

The research findings are often contradictory. Different investigators have devised various models to explain the disparities. The two main theories which have emerged in this sector of mass communications research are embodied in the "aggression model" and the "catharsis model".

Investigators who work with the aggression model take their stand on a number of laboratory experiments in which the subjects, after having been shown a film containing violence, have tended to react more aggressively than subjects who were not shown the film (the control group). Advocates of this model explain the increased aggression by saying that the filmed violence brings out the aggressiveness which is otherwise hidden in an individual owing to the pressure of social norms which exists against certain acts of violence. According to this model, the presentation of violence in films can also induce emulation. One of its proponents is the American investigator, L. Berkowitz.[1)]

Laboratory experiments are likewise cited by those who work with the catharsis model. These experiments, however, have produced a contrary result, i.e. the subjects tended to become less aggressive after having seen violent sequences of a film as compared with the control group. Investigators who recommend the catharsis model hold that the latent aggressiveness of an individual finds an outlet and is thereby reduced when he sees violence enacted in films and on TV. This model has one of its leading spokesmen in the American investigator, S. Feshback.[2)]

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1) Berkowitz, L.: Aggression: A Social Psychological Analysis, McGraw-Hill, New York 1962

2) Feshback, S.: The Stimulating vs. Cathartic Effects of a Vicarious Aggressive Activity, J. Abnorm. Soc. Psychol., 1961.

This division into an aggression model and a catharsis model has been more recently criticized and modified. Several investigators contend that the models need not be mutually exlusive. An individual might well react in accordance with the aggression model on one occasion and in accordance with the catharsis model on another. Similarly, it is quite possible that different individuals react to violence in different ways.

Rather than devote effort to further refinement of either model, therefore, there would appear to be greater merit in considering the situation in which an individual is exposed to the film and in also considering his personality. Apart from these modifications, some studies have observed that the type of violence enacted in films must be considered as well. It has often been found that individuals react differently in an experimental situation if they perceive the filmed violence as "justified" (its victim being described under the prevalent value system as a "rotter" or the like). In cases where the violence is perceived to be justified, the individuals have usually reacted in ways which seem to confirm the aggression model.

In the debate that has been waged in the U.S. and elsewhere, the film producers have defended themselves against the charge of exerting pernicious influence by contending that the majority of films containing fictional violence are those in which "good" (upholders of the law) overcomes "evil" (the lawbreakers). According to the producers, the sole purpose served by their films is to strengthen the negative sanctions of society against violence. The findings which have emerged on "justified" violence do not appear to accord with this hypothesis. On the contrary, certain investigators have pointed out the "justified" violence in films tends instead to make the individual react more aggressively. Further, the very fact that films containing fictional violence are screened in cinemas and on TV can be construed to mean that society positively sanctions acts of violence as a solution to conflicts.

Most of the findings mentioned above have come from experimental studies in a laboratory setting, where the impact of films on individual attitudes and behaviour is measured over a period of a few hours or, at the most, several days. In other words, the findings primarily

pertain to immediate or short-term effects. The laboratory experiments have been mainly criticized on the following grounds:

1. The laboratory setting is overly artificial.
2. The methods used to measure aggression are unreliable.
3. Too little weight has been attached to long-term effects.

As some critics have emphasized, wher. efforts are made in sociological field investigations outside the laboratory to measure aggression as the effect of films containing violence, the effect has not been amenable to proof except in respect of respondents whose emotional life was seriously disturbed earlier. The findings of field investigations do not lend themselves to inclusion in either the aggression or catharsis model. Proponents of the catharsis model, however, have interpreted these results in support of their theory. But before sides are taken on this issue, it ought to be borne in mind that even though a part of the criticism levelled against laboratory experiments is relevant, the findings of field research are even more vulnerable. The methods used to measure aggression in a field study are still unreliable, and the difficulty of identifying causal relationships is greater in a survey investigation than in an experiment.

Towards the end of the 1950's mass communications research increasingly shifted its focus onto "uses-and-gratifications" studies. Although such studies already date back to the 1940's, they came in for renewed attention when their connection with functional analysis was demonstrated. Among their leading proponents are Wright[3] and Klapper. In an article entitled "Mass Communication Research: An Old Road Resurveyed" (1963), the latter has discussed on the advantages and disadvantages of the uses- and-gratifications model for studies within different fields of mass communications.

The strength of this model, according to Klapper, lies in assigning to the individual an active and selective role, which it does by rephrasing the classical question, "What do mass media do with the individual?" as "What does the individual do with massmmedia?" Since the individual is allowed to play an active role (consciously and unconsciously), the

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3) Wright, Ch.R.: Mass Communication. A Sociological Perspective, Random House, New York 1959.

uses-and-gratifications model admits of more discriminating answers to the questions. The consequence is to break away from the traditional effect question, almost meaningless in Klapper's eyes, which demands a simple yes-or-no answer. A question of the type Klapper thinks is aksed far too often is: "Do films containing violence produce juvenile delinquents?", where the answer sought is Yes or No. Not even the investigators have yet been able to give yes-or-no answers, notes Klapper, who adds that this question cannot be answered in such simple terms, either. He bases his views on two considerations: first, the fact that most young people and adults watch Westerns and crime programmes (which usually include fictional violence), yet the majority of these persons are not criminals; and second, a number of studies which found that programmes containing violence have not incited "normal" children to commit violent acts, but that some children described as "maladjusted" (in one or another sense of this word) have had their earlier norms and values reinforced. Klapper contends that further research aimed at establishing TV or films as a direct cause of incitement to violence will not produce findings which differ from those other current research has been able to make. The present state of research is summarized with the help of a well-known mass-communication researcher, Bernard Berelson; certain types of portrayed violence will turn out to have certain types of effects at the aggression level among certain types of children under certain types of conditions.

In Klapper's opinion, the research concerned with how children are influenced by films and TV programmes containing violence should, rather than try to reach the medium's direct, linear effects, describe how individuals make use of different media content and relate this to the individual's social groups and also to the major social systems which make up the society.

The present research report ventures to analyze the reactions of children to televised violence with reference to the approach indicated by Klapper. We do so by seeing how children use the medium (principally in terms of exposure) and at the same time, since the children are small, relating this to use of the medium by the primary group (the mothers).

PRACTICAL BACKGROUND OF THE STUDY

In the spring of 1968 the Audience Research Department of Sveriges Radio conducted a study dealing with the social habits and media behaviour of 3-6 year olds.[4] The studied sample of 700 children is representative of this age group in Sweden and was drawn by the Central Bureau of Statistics. Information was obtained from the answers given by the mothers of these children in a questionnaire.

We confine ourselves under this head to examples from three types of TV programmes which were included in the study's terms of reference.

The first type is a series of programmes for children called Titta, leka, lära (Look, play, learn). More than 90 % of the children saw at least one programme in the series and the majority are said by the parents to react with "great interest" when they watch it. Three-fourths of the children are reported to have been influenced by it in their games and behaviour, and this influence is especially noticeable immediately after the programme ends or for a day or so afterwards.

The second type is Aktuellt, the regular TV newscast. It, too, is familiar to about 90 % of the children, but the vast majority are said by the parents to exhibit "complete lack of interest" or "small interest" in the programme. Only a minority have been influenced in their games and behaviour, and that lasts until just after the programme.

The third type is the Western, here represented by the American series, High Chaparral. Three-fourths of the children saw at least one of the programmes, and according to the parents, most of them react with "great interest" or "enthusiasm mixed with fright". More than half the children are reported to have been influenced by the programme in their games and behaviour, and this influence has persisted in most cases from several days to a few months after date of broadcast.

The three cited examples make it possible to see how the child's immediate reaction to a programme correlates with its influence and also to note that only the Western has, according to the parents, left any longterm effects. This was one of the reasons why we elected

4) Feilitzen, C. von and Linné, O.: The living habits and media behaviour of 3-6-year-olds, Audience Research Department, Sveriges Radio, 1968.

to study how children react to films containing fictional violence. The films singled out for examination are those which enter into the High Chaparral series.

In order to make the long-term effects (if any) of such films amenable to analysis, we selected two categories of children from the survey investigation: those who had seen a few instalments of the series (low-exposed children). and those who had seen many instalments (high-exposed children). By picking out children for whom we already had information from the survey investigation, we gained the advantage of not having to impose a perhaps artificial classification of subjects on an experimental situation, but could base our observations on the reported behaviours of the children in connection with the regular telecasts of High Chaparral.

OBJECT OF THE STUDY

This particular project has sought to study what influece, if any, fictional violence has on children. Towards this end we have distinguished between short-term and long-term effects, which has affected the research design. The measurement of short-term effects draws on a stimulus-response situation (the experimental part) and of long-term effects on a study in depth (called the intensive study), where we have analyzed child reactions to violence and related these to parental use of TV.

The central questions in this explorative study are the following: Are children who watch programmes containing fictional violence (High Chaparral), where the violence is "justified", more inclined immediatley afterwards to choose aggressive behaviour to solve a conflict situation than children who do not watch such programmes?

This question involves the short term effects.

Are children who have previously seen the series on TV many times (the high-exposed) more inclined to choose aggressive behaviour to solve a conflict situation than children who have previously seen the series a few times (the low-exposed)?

This question involves the long-term effects.

Does the "home setting" of high-exposed children differ from that of the low-exposed as regards the use of TV?

This complex of questions ties in with the uses-and-gratifications model and is meant to illuminate the relation between possible long-term effects and the environment in which the children live at home.

DESIGN

The project may be described as semi-experimental. In the outline of research design given below, the experimental part is marked off by the inner rectangle. Remaining parts of the design are ascribable to the intensive study.

Low-exposed children	High-exposed children	Mothers
		questionnaires on
1. knowledge test and rating test	1. knowledge test and rating test	1. exposure to tv
2. rating test	2. rating test	2. attitude test on developing children's TV tastes
3. aggression test LB (half the group)	3. aggression test HB (half the group)	questionnaire on 3. receiving situation for High Chaparral
FILM together with mothers	FILM together with mothers	FILM together with children
4. aggression test LA (other half of group)	4. aggression test HA (other half of group)	
5. comprehension test	5. comprehension test	4. comprehension test
		questionnaire on 5. background variables
n = 16	18	34

The different tests and questionnaires are described in greater detail under "Measuring Instruments" below.

SAMPLE

The children embraced by the intensive study are between 5 and 6 years of age and come from the Stockholm area. Age, sex and place of residence were held constant. Data were collected for 34 children and 34 mothers, making o total of 68 individuals. 17 of the children were boys and 17 were girls. The "low-exposed to High Chaparral" group numbered 16 children, 8 boys and 8 girls, while the "high-exposed" group numbered 18, whereof 9 boys and 9 girls.

Low-exposed children had seen an average (median, MD) of <u>two</u> programmes from the series, whereas high-exposed children had on average (MD) seen <u>all</u> the programmes.

The distribution looks as follows:[5)]

	Low-exposed children		High-exposed children	
	Number	%	Number	%
did not see any programme	1	6	-	-
saw a couple of programmes	11	69	-	-
saw c. 1/4 of the programmes	3	19	-	-
saw c. 1/2 of the programmes	1	6	-	-
saw c. 3/4 of the programmes	-	-	4	22
saw all the programmes	-	-	14	78
	n = 16		18	

It was because the survey investigation had given us background information about both mothers and children that we selected the children from it. One reason we picked out 5-6 year olds is that they are better able to concentrate than 3-4 year olds. Moreover, neither age group has yet been subjected to systematic school instruction and its attendant norms. Nor is it likely that the 5-6 year olds have consumed their major diet of films containing violence from a source other than TV.

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5) This distribution could be held constant during the experiment because telecasts of High Chaparral had ended just before the investigation started.

The findings of this intensive study should not be generalized as being applicable to all children aged 5 and 6. One reason is that the children who were picked out had been exposed earlier to High Chaparral;[6] another reason is that the sample of children and mothers is relatively small. We wish to regard the following results as a platform for further research.

Social background of the mothers

The mothers of low-exposed children were 33 years old on the average, of high-exposed children 35 years old. Further, the former category had two children on the average, while the latter had three. 50 percent of the low-exposure mothers had higher educational attainments (completion of lower secondary school or beyond), as compared with 44 percent of high-exposure mothers. Lastly, it turned out that 75 percent of the former were stay-at-home housewives, as were 78 percent of the latter group. The distributions by these background variables do not present any statistically significant differences between the mothers of low-exposed and high-exposed children.

TESTING METHOD

The children and mothers arrived in groups ranging from 2 to 5 pairs. Tests were administered to the children individually in separate rooms located near the room where the mothers were. After the first tests the children were taken back by their interviweers to this room, where children and mothers could watch the film together. After the showing each child returned with its interviewer to the first room to complete the testing procedure. In that way none of the children could communicate with and be influenced by one another or by their mothers. The five persons who tested the children all had great experience of interviews.. All of them belong to the staff of the Audience Research Department. The mothers were tested the whole time as a group under the leadership of a project leader.

The film shown was a sequence about 15 minutes long taken from an instalment of High Chaparral which Sveriges Radio had not telecast.

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6) The survey investigation from which the children were selected showed that 81 % of the 5-6 year olds in Sweden had seen one or more instalments of High Chaparral.

Though short, it had continuity of action: Victoria Cannon, wife of one of the series' main characters, John Cannon, was kidnapped by a Confederate officer after he had shot down her brother, Manolito Montoya. The sequence, which was put together from cuts, was considered by the test management to be representative of the series.

We should add at this juncture that the children are obviously subjected to certain unpleasant mental risks in a study of this kind. To minimize the poosibly harmful effects of the film, our experiment was deliberately designed to enable children to see the film together with their mothers (who at an earlier stage had given their permission for this purpose) and also have the film discussed with children and mothers after the testing.

To reduce as far as possible the comprehension gap between generations on account of the sound track, the film was shown without subtitles. The children could not yet read, and we assumed that the mothers did not command "Americanese" well enough to give them too much superiority in this respect.

MEASURING INSTRUMENTS

Children

1. Knowledge test. Test material: Stills of the main characters in High Chaparral. The children got to speak about the identity of these persons and to name those they liked most and least.

The object of this test was twofold: first, we wanted to find out how much the children had learned about the characters; and second, we wanted to use the test as a validity control on degree of exposure.

2. Rating test. Test meterial: Stills of Indians and cowboys. The children were asked to evaluate them.

The object of this test was to measure what effect High Chaparral may have had on the shaping of norms.

3. Aggression test. Test material: Drawings of a child in three situations. The subject children were told a story about how a boy/girl had been given a bicycle but shortly thereafter robbed of it by another boy/girl. They were asked to choose between threee given behaviours to indicate preference for how the child in the story should resolve this conflict situation.

The object of this was to measure the possible short-term and long-term effects of High Chaparral as regards aggression.

4. Comprehension test. Test material: 5 stills from the film. The children were asked to arrange these in the chronological order in which they appeared in the film.

The object of this test was to measure how much the children grasped of this type of film.

Mothers

Virtually all the testing administered to mothers consisted of "pen-and-paper" tests. The battery included an attitude scale of Likert type which had been previously tried out on a similar group of mothers.

1. Questionnaire. Exposure of mother and family to TV and appreciation of certain TV programmes.

The object of this questionnaire was to measure how different degrees of child exposure interacted with family use of TV.

2. Attitude scale. The scale dealt with attitudes of mothers to what children should see and not see on TV.

The object of this scale was to measure how different degrees of child exposure interected with attitudes of mothers to development of TV tastes.

3. Questionnaire. The situation which governed when the family was watching TV. Included were questions as to whether mothers talked with

the children about the TV programmes in general and High Chaparral in particular, as to what the child customarily did after having seen the programme etc.

The object of this questionnaire was to measure how different degrees of child exposure interacted with the family's TV situation.

4. Comprehension test. Same as that for the children, except that the stills were provided with letters to enable the mothers to perform the test individually and anonymously.

The object of this test was to compare the mothers in their grasp of the film.

5. Questionnaire. Background variables.

The object of this questionnaire was to measure how different degrees of child exposure interacted with social background of the mothers.

In addition to the foregoing tests, the report of findings which follows presents data from the previously mentioned survey investigation.

FINDINGS

Findings from the intensive study will be taken up in the following sequence:

The experimental part of the study dealing with the possible short-term effects of High Chaparral will be reported on first. We then consider the possible long-term effects of the series, child reactions to the film in a broader sense and, lastly, data pertaining to the family. The tables are interspersed throughout the text. Inasmuch as the number of the children is relatively small, the tabulations will show both the absolute numbers of children and the relevant proportions in percent. The research hypotheses are stated separately under each section for the sake of clarity. Since the findings are usually given in terms of differences between the exposure groups, we have tested them for statistical significance by means of a chi square (X^2) test and/or a sign test for K independant sample. The significance levels we employ are 5 % (0.05), 2 % (0.02), 1 % (0.01) and 0.1 % (0.001).

I AN ATTEMPT TO MEASURE THE FILM'S POSSIBLE SHORT-TERM EFFECTS

Aggressiveness

The experimental part of the study looked as follows:

LB	HB
Low-exposed children who took the aggression test before the film	High-exposed children who took the aggression test before the film

FILM

LA	HA
Low-exposed children who took the aggression test after the film	High-exposed children who took the aggression test after the film

In this "before-after" test we shall draw three comparisons in order to test hypothesis I.

Hypothesis I: There is no difference in aggressiveness between children who took the aggression test before the film was shown and children who took this test afterwards.

All three of the comparisons here drawn to measure whether the film has a direct effect on children's choice of behaviour in the aggression test are vertical.

LB HB

FILM

LA HA

1. The children in groups LB + HB hare compared with those in groups LA + HA for aggressiveness.

2. The children in group LB are compared with those in group LA for aggressiveness.

3. The children in group HB are compared with those in group HA for aggressiveness.

Note that in this part of the study we are not comparing the low-exposed with the high-exposed, but are solely interested in whether the film influences children's choice of behaviour.

Comparison 1 is presented below.

Table 1

What do you think the child should do?	Children who took the aggression test before the film		Children who took the aggression test after the film	
	Number	%	Number	%
fight the boy/girl	7	39	4	25
run to mother, alt. let boy/girl have the cycle	11	61	12	75
n =	18		16	

In this conflict situation most of the children, both those who took the test before and after the film was shown, elected to run to Mother (only one child, a low-exposed, elected to let the boy/girl have the bicycle).

The differences between those who saw the film before and after the aggression test are not statistically significant. Chi square has a value as low as 0.25, signifying a great probability that the differences are due to chance. The outcome of comparison 1 thus supports hypothesis 1. To reinforce this finding, there should likewise be no difference in comparison 2 between low-exposed children who took the test before the film and low-exposed children who took it afterwards, nor in comparison 3 between high-exposed children who took the test before the film and the high-exposed who took if afterwards.

Below is comparison 2.

Table 2

What do you think the child should do?	Low-exposed children who took the aggression test before the film		Low-exposed children who took the aggression test after the film	
	Number	%	Number	%
fight the boy/girl	1	14	1	11
run to Mother, alt. let boy/girl have the cycle	6	86	8	89
n =	7		9	

Here again most children in both groups choose non-aggressive behaviour. The intergroup differences are not statistically significant. Since chi square has a value of 0.33, the differences can be assumed as due to chance.

Comparison 3 relates to high-exposed children:

Table 3

What do you think the child should do?	High-exposed children who took the aggression test before the film		High-exposed children who took the aggression test after the film	
	Number	%	Number	%
Fight the boy/girl	6	55	3	43
Run to Mother, alt. let the boy/girl have the cycle	5	45	4	57
n =	11		7	

The "before-after" comparison of high-exposed children does not produce any statistically significant differences, either. Chi square has a value of 0.00, suggesting maximal probability that the differences are due to chance.

All three of the foregoing "before-after" comparisons indicate that the film has not generated aggressive behaviour in this case. These comparisons accordingly support hypothesis I.

Summary

In the experimental part of the intensive study we sought to measure whether children who watch programmes containing fictional violence (High Chaparral), where the violence is "justified", were more inclined immediately after the programme to choose aggressive behaviour to resolve a conflict situation than children who were tested for aggression before they watched the film. It turned out that we did not obtain any significant differences between children who were shown the film och those who were not before they were tested for aggression. Hence the film caused no short-term effects as regards aggressiveness.

The introductory part of this report made reference to the aggression model and the catharsis model. Our findings on the film's short-term effects as regards aggressiveness do not support the aggression model, but for that reason it cannot be said that they support the catharsis model. In order to do so, the children who were tested for aggression after the film ought to have been less aggressive than the children who were tested beforehand. That was not the case: as we noted above, no statistically significant differences were found between the groups.

II AN ATTEMPT TO MEASURE THE SERIES' POSSIBLE LONG-TERM EFFECTS

Aggressiveness

In the previous section we could establish that the screened sequence from High Chaparral did not cause increased aggressive behaviour directly after the showing. Our aim in this section is to find out whether children of previous high exposure to the series tend more to choose aggressive behaviour than children of previous low exposure, irrespective of whether they saw the film in the investigative situation. In other words, we want to study what can be described as the series' long-term effects, and we do so by undertaking a new analysis of earlier data.

LB	HB
Low-exposed children who took the aggression test before the film	High-exposed children who took the aggression test before the film

FILM

LA	HA
Low-exposed children who took the aggression test after the film	High-exposed children who took the aggression test after the film

When measuring short-term effects we had the same starting position as now, but then we made three vertical comparisons. For purposes of measuring long-term effects the analysis will consist of three horizontal comparisons. Hence this part of the study is no longer a "before-after" experiment. The comparisons drawn in this section were as follows:

LB HB

LA HA

1. The children i groups LB + LA are compared with the children in groups HB + HA for aggresssiveness.

2. The children in group LB are compared with the children in group HB for aggressiveness.

3. The children in group LA are compared with the children in group HA for aggressiveness.

These three comparisons were performed to test hypothesis II:

Hypothesis II: High-exposed children choose aggressive behaviour in a conflict situation to a greater extent than low-exposed children.

Comparison 1 is given below.

Table 4

What do you think the child should do?	Low-exposed children		High-exposed children	
	Number	%	Number	%
fight thebboy/girl	2	13	9	50
run to Mother, alt.let boy/girl have the cycle	14	87	9	50
n =	16		18	

It will be seen that previously low-exposed and high-exposed children differ in electing to fight the boy/girl. Only two of the low-exposed (13 %) choose an aggressive solution as compared with 9 of the high-exposed (50 %). The difference is statistically significant at the 1 % level. Chi square has a value of 7.29. The outcome of this comparison accordingly supports hypothesis II, but if the hypothesis is to be fully supported there should also exist a statistically significant difference in comparison 2, i.e. between the low-exposed children who took the test before the film was shown and the high-exposed who did likewise, as well as in comparison 3, i.e. between the low-exposed and high-exposed who both took the test afterwards.

Now follows comparison 2.

Table 5

What do you think the child should do?	Low-exposed children who took the aggression test before the film		High-exposed children who took the aggression test before the film	
	Number	%	Number	%
fight the boy/girl	1	14	6	55
run to Mother, alt. let boy/girl have the cycle	6	86	5	45
n =	7		11	

Again in comparison 2, the high-exposed children choose aggressive behaviour to a greater extent. The difference of behaviour choice between the previously low-exposed and high-exposed children is statistically significant at the 5 % level, with a chi square value of 4.86.

And here is comparison 3.

Table 6

What do you think the child should do?	Low-exposed children who took the aggression test after the film		High-exposed children who took the aggression test after the film	
	Number	%	Number	%
Fight the boy/girl	1	11	3	43
run to Mother, alt. let boy/girl have the cycle	8	89	4	57
n =	9		7	

We obtain the same trend from comparison 3 as from the two preceding. The high-exposed children choose aggressive behaviour to a greater extent than the low-exposed. The difference is significant at the 5 % level, with a chi square value of 4.15.

These three comparisons permit us to observe that the previously high-exposed children choose aggressive behaviour in a conflict situation to a greater extent than the previously low-exposed. This difference between the two groups does not depend on exposure to film with violent content in the actual experiment and can thus not be ascribed to the film's short-term effect.

All three comparisons support hypothesis II.

However, it would be rash to conclude from these findings that all children who watch many films of violent content on TV tend to use violence in conflict situations for that reason alone. Throughout the rest of this report we shall try to analyze this difference of long-term effects arising from different degrees of exposure to High Chaparral on the following two basis: first, on the strength of individual data on the child gathered from both the children and their mothers; and second, by studying how the child's reactions interact with its "home setting".

Familiarity with the series

Presented under this head are measurements which describe what the children know about High Chaparral. The findings are based on their own answers. The children were called upon to answer the knowledge and rating questionnaires without being aware that they were going to see a film in the first place. We elected to measure their familiarity with the series by displaying stills of the five main characters asking the children to identify them.

Hypothesis III: High-exposed children are more familiar with the series' main characters than low-exposed children.

The tabulation below shows how many of the five main characters were known by name to children in the different exposure groups. To make the result clearer, the answers are grouped in two categories.

Table 7

Number of characters known by name	Low-exposed children		High-exposed children	
	Number	%	Number	%
0 - 1 main character	9	56	3	17
2 - 5 main characters	7	44	15	83
n =	16		18	

It will be seen that the high-exposed children are more knowledgeable about the main characters. The difference is statistically significant at the 5 % level, with a chi square value of 4.21. On an average (MD), the low-exposed children could identify one main character, as compared with the three identified by the high-exposed children.

The relative abilities of each group to identify every main character by name are tabulated below.

Table 8

Number of correct answers for each main character	Low-exposed children			High-exposed children		
	Number	%	n	Number	%	n
Manolito Montoya	11	69	16	15	83	18
Buck Cannon	6	38	16	15	83	18
Blue Cannon	5	31	16	13	72	18
Victoria Cannon	6	38	16	9	50	18
John Cannon	3	19	16	3	17	18

The sole exception to the expected result proved to be John Cannon. Of all the main characters he was the least known, only 3 children from each group being able to identify him. The names of the other four were better known to the high-exposed children. For two of them the differences are statistically significant, both at the 1 % level: Buck Cannon (chi square = 9.60) and Blue Cannon (chi square = 7.47). The main character familiar to most of the low-exposed children was Manolito Montoya: 69 percent of the children knew his name. Mr Montoya was also best known among the high-exposed children, but on that count had to share the honours with Buck Cannon: 83 percent of the high-exposed knew them both.

These finding may be said to support hypothesis III, which predicted that more high-exposed children would be familiar with the main characters in the series. At the same time, the findings can serve as a validity control which tells us that our classification by low-exposed and high-exposed children has functioned. Incidentally, all the members of both groups were able to recall that they had seen these persons on TV in the High Chaparral programme.

Ratings

The knowledge test was combined with certain rating questions asking children to state which of the main characters they liked best. Both exposure groups conferred top popularity on Manolito Montoya, who had earlier proved to be the most readily recognized character for both low-exposed and high-exposed children.

The least-liked character for both groups was John Cannon, who had earlier turned out to be the hardest to identify, also for both groups. These questions formed a bridge leading over to the rating test, which like the knowledge test consisted of stills. We wanted to compare the reactions of children to some classical members of the Western portrait gallery, but because the children were small we were compelled by reasons of testing methodology to limit the comparison to two genre types: an Indian and a cowboy. We were interested in finding out which of three persons the child liked best: the cowboy, the Indian, or the main character who had earlier been singled out as the least liked.

Table 9

Which of these do you like best?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Main character	7	44	13	72
Cowboy + Indian	9	56	5	28
n =	16		18	

Most of the high-exposed children preferred the main character, while most of the low-exposed preferred the cowboy or Indian. The difference is statistically significant hat the 5 % level, with a chi square value of 4.13. Hence it appears that the high-exposed children are somewhat more emotionally attached to the main characters in High Chaparral, at least insofar as they prefer an otherwise disliked main character to an unknown.

The other rating questions asked of the children were of a more general type than the knowledge questions. We distinguish between three types of problems involved:

Which of the two, the cowboy or Indian, did the children think was "nicest" (i.e. more decent)?

Which of the two did more shooting (as percieved by the children)? Is it right for a cowboy or Indian to shoot?

Hypothesis IV a: High-exposed children think to a greater extent than low-exposed children that the cowboy is nicest.

Our findings are tabulated below.

Table 10

Who do you think is nicest?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Cowboy	13	81	12	67
Indian	3	19	4	22
don't know	-	-	2	11
n =	16		18	

Note that the cowboy rates highest in both exposure groups. The intergroup differences of iopinion are not significant; on the contrary, the chi square value is 0.00. Thus the findings do not support hypothesis IV a.

Hypothesis IV b: High-exposed children think to a greater extent than low-exposed children that the Indian shoots more than the cowboy.

The findings are reported below:

Table 11

Who do you think shoots more?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Cowboy	3	19	7	39
Indian	12	75	11	61
don't know	1	6	-	-
n =	16		18	

More gunfighting on the Indian's part is a belief held by the majority of children in both exposure groups. Although the intergruop difference is somewhat greater than in the previous table, it is not statistically significant. The findings do not support hypothesis IV b, where we predicted that a greater proportion of the high-exposed children than the low-exposed would impute more shooting to the Indian than to the cowboy.

In respect of both these questions, therefore, the majority of children in both exposure groups have adopted a negative attitude to Indians. This ought to suggest that the children have not acquired information about and attitudes to "palefaces and redskins" merely from the 20 instalments of the High Chaparral series which Swedish TV broadcast during the spring of 1968, but have also had and have access to other sources of norms.

Hypothesis IV c: High-exposure children think to a greater extent than low-exposed children that it is more "right" for a cowboy than for an Indian to shoot.

Every child was shown the picture of the cowboy and asked whether it was right for him to shoot. The same procedure was repeated for the Indian. The findings for these questions are tabulated below.

Table 12

Is it right for a cowboy to shoot?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Yes	6	38	12	67
No	3	19	6	33
don't know	7	43	-	-
	n = 16		18	

Table 13

Is it right for an Indian to shoot?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Yes	5	31	7	39
No	9	56	10	56
don't know	2	13	1	6
	n = 16		18	

As to considering whether it is right for a cowboy to shoot, the high-exposed children seem to think so to a greater degree (67 %) than the low-exposed (38 %). However, the intergroup difference is not statistically significant. That may be because nearly half the low-exposed children said they don't know whether it is right or not, whereas none of the high-exposed had the same difficulty making up their minds. If the "don' t knows" are merged with the no answers

for the low-exposed, the intergruop difference becomes statistically significant at the 5 % level, with a chi square value of 4.18. But that procedure is not quite correct, since the "don't knows" could be theoretically assigned just as readily to the "yes" as to the "no" category.

If we turn instead to Table 13, "Is it right for an Indian to shoot?", we see that about one-third of each exposure group thinks so. The number of children who think it is right thus holds relatively constant for the low-exposed, but falls off for the high-exposed. Nor is the inter-group difference significant in this case. We can note that it was easier for the low-exposed children to answer "no" to this question than it was for the cowboy.

Lastly, we compared members of both groups who respectively thought it was right for an Indian or a cowboy to shoot.

It is mostly the high-exposed children who seem to think that the greater right to shoot rests with the cowboy. However, the intergroup difference of choice is not statistically significant. Hence none of the comparisons supports hypothesis IV c.

The same trend is noticeable for these questions as for the preceding two, namely that the absence of statistically significant differences between the children in the two exposure groups derives chiefly from the negative attitude to Indians held by <u>both</u> groups.

A final question under this head asked the children whether they preferred to be a cowboy or an Indian. The resulting differences between low-exposed and high-exposed children were not statistically significant. Both groups gave somewhat higher preference to the cowboy.

<u>Summary</u>

When we summarize the data pertaining to possible long-term effects of the High Chaparral series, the following picutrre emerges:

By comparison with the low-exposed children, a greater proportion of the high-exposed children choose more aggressive behaviour in the conflict

situation covered by the test. Further, the high-exposed are familiar with more main characters in the series and are also more emotionally attached to them. On the other hand, the two exposure groups do not differ on the other rating questions concerned with Indians and cowboys. Both groups regard the cowboy as a nicer person than the Indian. In addition, they believe an Indian shoots more than a cowboy. Lastly, the right to shoot is hold to be on the cowboy's side.

In the next part of this report we shall bring up questions about how children react to High Chaparral when they watch it and about how the programme is handled in the home. The purpose of these questions is to find out whether different ways of dealing with High Chaparral have influenced child reactions in the aggression test.

III REACTIONS OF THE CHILDREN TO WESTERNS

In this section we take up what we consider to be three important problems: how much children comprehend of the High Chaparral sequence we showed, how they behave in the home setting when they watch the film, and whether they have been frightened by the film at any time.

Comprehension of the film

We wanted to find out how much the children grasped of the film they saw in the experiment. Since other studies have indicated that 5-6 year olds often have difficulty in keeping up with the dialogue, we were primarily interested in trying to measure what the children understood of the action on the basis of the images themselves, and not in how much they could tell us about the film. A spontaneous narration of this kind would produce large margins of uncertainty in terms of testing methodology, inasmuch as the interviewer would have broad leeway to interpret how much a child grasped of the action.

Instead we devised a comprehension test which permitted a more objective analysis of comprehension in the two exposure groups, and which also made it possible to compare results as between children and mothers. The comprehension test consisted of five stills portraying key situations in the screened sequence. The children and their mothers were asked to arrange the stills in chronological order.

The following hyptheses were formulated for the three comparisons in which we were interested:

Hypothesis V a: Low-exposed and high-exposed children do not differ in their ability to arrange the pictures in chronological order (comprehension of the film).

Hypothesis V b: The mothers of low-exposed and high-exposed children do not differ en their ability to arrange the pictures in chronological order (comprehension of the film).

Hypothesis V c: The mothers are better able than either low-exposed or high-exposed children to arrange the pictures in chronological order (comprehension of the film).

The test answers of both exposure groups are tabulated below.

Table 15

Number of correct answers	Low-exposed children		High-exposed children	
	Number	%	Number	%
0	3	19	3	17
1	4	25	5	28
2	1	6	2	10
3	7	44	5	28
4	-	-	-	-
5	1	6	3	17
MD	2		2	
n =	16		18	

The low-exposed do not differ from the high-exposed in their comprehension of the film. On an average, both groups gave 2 correct answers out of 5 possible. This finding accordingly supports hypothesis V a.

The test answers of mothers are shown below.

Table 16

Number of correct answers	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
0	1	6	1	6
1	-	-	1	6
2	3	19	2	11
3	3	19	4	22
4	-	-	-	-
5	9	56	10	55
MD	4		4	
n =	16		18	

Mothers of low-exposed children did not differ from the other mothers in their comprehension of the film. On an average, both groups gave 4 correct answers out of 5 possible. This finding supports hypothesis V b.

The average number of correct answers was two for the children and four for the mothers. Hypothesis V c is tested below.

Table 17

Number of correct answers	Children Number	%	Mothers Number	%
0 - 2 (below child median)	18	53	8	24
3 - 5 (above child median)	16	47	26	76
n =	34		34	

Most of the mothers gave between 3 and 5 correct answers, while the majority of children answered between 0 and 2 correctly. The difference between children and mothers in their film comprehension is statistically significant at the 5 % level. Chi square has a value of 5.04. The findings support hypothesis V c.

To judge from this test, the children don't grasp so very much what is happening in the film. To some extent, that could also qualify the earlier reported findings as to the film's short-term effects. Reactions of children to the film should presumably be put in relation to what they comprehend and what they expect is going to happen. From these findings it might be said hypothetically that the majority of children scarcely seek out this type of film by themselves, seeing that its content appears strange and partly incomprehensible, but rather in response to their social environment in the form of peers and parents, who impress on them that there is a positive quality in watching films of this type. In our subsequent analyses we shall see whether other findings about children and mothers will strengthen or weaken the logic of this argument.

TV behaviour

In addition to finding out about film comprehension, we were interested in the child's ordinary viewing situation. To impart a specific content to questions for the mothers, they were asked about the habits and behaviour of their children in relation to High Chaparral.

Our terms of reference under this head are contained in the following questions:

1. When do the children watch High Chaparral (the evening broadcast or the daytime repeat)?
2. How do the children find out about broadcast times for High Chaparral?

3. What type of programme does the child usually talk about most?

Hypothesis VI a: High-exposed children tend more than low-exposed children to watch the evening broadcast of High Chaparral.

Table 18

When does the child usually watch High Chaparral?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Evenings only	3	20	5	28
Daytime (repeat) only	10	67	2	11
Both times	2	13	11	61
n =	15[7)]		18	

It will be seen that the repeats are mostly watched by the low-exposed children, whereas the majority of high-exposed usually watch both the first evening broadcast and the following repeat.

Statistical significance at the 1 % level, with a chi square value of 6.68, was found for the difference between low-exposed and high-exposed children who had seen either the evening broadcast or the repeat. In addition, we found a significant difference at the 2 % level, with a chi square value of 5.95, between the low-exposed and high-exposed who had watched either the evening broadcast or repeat and those who had watched both broadcasts. Thus not only have the high-exposed seen more instalments of High Chaparral than the low-exposed (which as we mentioned earlier was a sampling criterion), but they have also seen the same instalment several times.

Hypothesis IV a is accordingly supported by the findings. The high-exposed children saw more evening broadcasts as well as more repeats than the low-exposed children.

We were also interested in how the children found out about broadcast times for High Chaparral.

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7) The frequency distributions for the low-exposed group in this and some of the following tables are based on only 15 children because one mother did not answer these questions.

Hypothesis VI b: Low-exposed children tend more than high-exposed children to find out about High Chaparral broadcasts by accident.

Table 7

How does the child find out about High Chaparral broadcasts?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Someone in the family usually mentions it	4	27	1	6
Child keeps track of broadcast himself	4	27	15	82
Child finds out by accident	7	36	2	12
n =	15		18	

The table shows that most of the low-exposed children find out about High Chaparral by accident, whereas the majority of high-exposed themselves keep track of the times. We performed two tests of significance. The one was to test the hypothesis relating to the difference between children who watch the programme by accident and those who watch because someone mentions the programme is on or because the child himself knows about it. The difference between low-exposed and high-exposed children proved significant at the 1 % level, with a chi square value of 7,16. These findings accordingly support hypothesis VI b. The second test concerned the difference between children in each group who are told by a family member that the programme is on and those children who keep track of the times themselves. To reach statistical significance at the 5 % level, we need a chi square of 3.84, whereas the actual value we obtained was 3.82. Even so, it can be supposed that the differences are not due to chance.

The next question had to do with the types of programme the children generally preferrred to talk about.

Hypothesis VI c: High-exposed children generally prefer to talk more about Westerns than do low-exposed children.

The mothers were presented with a list of seven different types of TV programmes and asked to mark the one most talked about by their children. Since it turned out that the high frequencies were mono-

polized by two programme types, only these two are identified below. The remaining five are combined under "other TV programmes".

Table 20

Which type of programme does the child usually talk most about?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Children's programmes	10	67	2	11
Westerns	3	20	10	54
other TV programmes	2	13	6	35
	n = 15		18	

It appears that the children in both exposure groups have dissimilar interests. The majority of low-exposed talk mostly about various programmes for children, while the majority of high-exposed are keener on the Westerns. The intergroup difference is statistically significant at the 1 % level, with a chi square value of 6.82. These findings accordingly support hypothesis VI c.

Indeed, several of the findings under this head indicate that, in behavioural terms, the high-exposed children are more interested in Westerns. More of them watch both the evening broadcast and repeat, and prefer to talk about Westerns as compared with the low-exposed children. One reason for the greater interest in this type of film among the high-exposed may be that, in consequence of family behaviour and reactions, they have assimilated an attitude to Westerns which attaches a positive value to these films. If this logic holds we ought to find, for example, the mothers of high-exposed children taking a more positive attitude than the other maternal group to this type of film. We shall return to these thoughts in the next section.

Susceptibility to fear

Under this head we shall examine what mothers have said about the fear reactions of children who were exposed to instalments of High Chaparral in the home.

Hypothesis VII: High-exposed children tend more than low-exposed children to have been frightened by High Chaparral at one time or other.

The findings are shown in the table below:

Table 21

Has the child ever been frightened by High Chaparral?	Low-exposed children		High-exposed children	
	Number	%	Number	%
Several times	8	52	7	39
Once or twice	4	27	4	22
Never	2	14	7	39
No answer	1	7	-	-
n =	15		18	

It would seem that slightly more of the low-exposed children have been frightened at least once by High Chaparral, but the difference is not statistically significant. The findings cannot be said to support hypothesis VII.

Next, we can establish that the majority of children in both exposure groups have (according to the mothers) been frightened by High Chaparral one or more times. Just what susceptibility to fear is supposed to mean in this case is uncertain, but it might well be asked why mothers of the high-exposed permit their children to watch so many films of this type when it is evident that the children sometimes become frightened and the mothers themselves admit as such. We shall try to illuminate other aspects of this matter in the final section.

Summary

The following picture emerges from a summary of data in this section: First and foremost, the findings call attention to the complex circumstances which exist when the children expose themselves to Westerns. On the one hand, we have a situation where most of the children in both exposure groups do not seem to understand so very much of what is happening, yet most of them are reportedly also frightened by what they see. On the other hand, these films tend to be watched to a greater extent by the high-exposed children, who also keep track of the broadcast times themselves and like to talk about Westerns in

preference to other programmes. Given these findings, two questions may be posed:

Do more of the high-exposed than low-exposed children seek out this type of film of their own accord?

Why do mothers of the high-exposed so freely permit their children to see Westerns, even though aware of the fear which High Chaparral sometimes arouses?

We shall look for at least part of the answers to these questions in the next two sections, which are concerned with the development of children's TV tastes, information about the children's viewing habits and ways of handling this type of programme, and lastly information from mothers about their own TV habits.

In the following section we shall also have a few words to say about a question which has underlain the whole intensive study as a basic theme:

Why did a greater proportion of the high-exposed children choose aggressive behaviour in a conflict situation?

IV DEVELOPMENT OF CHILDREN'S TV TASTES; TV HABITS

As a starting point, we assumed that 5-6 year olds are still almost entirely dependent on the family in many respects. Accordingly, some of the measured differences in child reactions should be traceable, at least in part, to differences in the TV-attitutes, TV-habits and programme treatment of the mothers.

The mothers were therefore interviewed on the viewing habits of their children, and also on their own habits and those of the family.

Primary emphasis in this section will be on terms of reference relating to the child. As mentioned earlier, the mothers filled in a Likert scale dealing with their attitudes to the development of children's TV tastes, as well as several questionnaires on children's viewing habits and behaviour.

Attitudes of mothers to development of children's TV tastes

A specially constructed attitude scale (Likert scale) tested the mothers as to what the children should and should not watch on TV. The mothers were given 18 statements which they had to evaluate along a a six-point scale[8)].

The statements in the scale took up the following aspects, among others:

1. Children should see programmes which show "real" violence (as in newscasts).

2. It does the children good to watch Westerns and similar programmes.

3. In principle, children should only see programmes which are aimed at their age group (children's programmes).

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8) The Likert scale is an attitude scale consisting of 15-25 statements which are relevant for a specific attitude one seeks to measure. For each statement the subjects are called upon to give one of six alternative responses: 1. Agree completely, 2. Agree largely, 3. Agree with hesitation, 4. Disagree somewhat, 5. Disagree largely, 6. Disagree completely. The points for each response are totalled to determine the position of subjects' attitudes on the scale.

4. Children should see <u>all</u> types of TV programmes.

<u>Hypothesis VIII</u>: Mothers of high-exposed children impose fewer restrictions (permit the children to see more of all programme types) on viewing than <u>mothers</u> of <u>low</u>-exposed children.

We tested this hypothesis with a sign test and the result follows below:

Table 22

Number of mothers who said they imposed	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
Fewer restrictions on children's viewing than the average (above median)	4	25	13	72
More restrictions on children's viewing than the average (below median)	12	75	5	28
	n = 16		18	

The table discloses a difference between mothers of low-exposed and high-exposed children in attitudes to the development of TV tastes. Mothers of high-exposed children impose <u>far fewer restrictions</u> than the other mothers. The difference is statistically significant at the 2 % level and the chi square value is 5.78. These findings support hypothesis VIII. It should be pointed out that the <u>fewer restrictions</u> for mothers of high-exposed children apply to all statements.

The statements which produced the biggest intergroup differences of attitude scores were the following, listed in descending order:

1. Children are no worse off from watching High Chaparral than adults.

2. Children need to see a rousing Western on TV now and then to offset all the "auntie" stuff on the children's programmes.

3. It is dangerous for the children to see Westerns.

4. It's nonsense to claim that TV programmes instill bad tastes in Children.

Not only are the mothers of high-exposed children less restrictive, but they also feel to a greater extent that children can be allowed in principle to see everything on TV and not be harmed by it. This observation probably contains part of the answer to the question asked in the previous section: Why do mothers of the high-exposed so freely permit their children to see Westerns, even though aware of the fear which High Chaparral sometimes arouses?

Children's TV habits

We also wanted to relate the findings on maternal attitudes to taste development to what the mothers said earlier about the "actual" TV habits of their children.

The findings presented under this head are taken from the survey investigation, which provided the sample of children on which this study is based. Perhaps the biggest advantage of that procedure is to make the mothers less inclined to "gild the lily" (theoretically at least) when filling in the questionnaire about children's mass media consumption than in a situation where they are no longer anonymous to the research director.

Hypothesis IX a: High-exposed children watch TV more than low-exposed children. (It is important to remember in this context that the terms, "low-exposed" and "high-exposed", have so far concerned exposure to High Chaparral only).

The original response alternatives have been combined in two categories to make the data easier to grasp.

Table 23

How many days a week does the child usually watch TV?	Low-exposed children		High-exposed children	
	Number	%	Number	%
7 days a week	3	19	14	78
Less than 7 days a week	13	81	4	22
	n = 16		18	

The findings are clear-out: most of the high-exposed children usually watch TV seven days per week, while the majority of low-exposed watch it less. The difference is statistically significant at the 0.1 % level,

with a very high chi square value of 34.69. These findings support hypothesis IX a. They also agree with the previously reported attitude scale, where mothers of high-exposed children imposed fewer restrictions on viewing than the mothers of low-exposed children.

In addition to the quantity of viewing, we tried to measure differences of watching other programmes in which scenes of violence occur. We knew from the survey investigation that over 90 percent of the 5-6 year olds in Sweden have seen the main newscast, Aktuellt. Our question now was: Do low-exposed children differ from the high-exposed in their viewing of this programme?

Hypothesis IX b: High-exposed children tend more than low-exposed children to watch Aktuellt.

Table 24

Has the child ever watched Aktuellt?	Low-exposed children		High-exposed children	
	Number	%	Number	%
At one time or other	14	93	10	56
Usually	1	7	8	44
	n = 15		18	

All children have watched Aktuellt at least once, but the high-exposed preponderate in watching it usually. The difference is statistically significant at the 5 % level, with a chi wquare value of 4.14. These findings accordingly support hypothesis IX b. A further point to be noted about this result is that it accords with the findings we obtained from the Likert scale, where it was found that the mothers of high-exposed children imposed fewer restrictions than the other mothers in regard to all types of programmes, hence Aktuellt as well; it also accords with the findings of quantitatively greater viewing on the part of high-exposed children.

Handling the programme

We were further interested in finding out about differences between the families of both exposure groups in their handling of High Chaparral.

Hypothesis X a: High-exposed children tend less than low-exposed children to talk with someone in the family immediately after having seen High Chaparral.

Table 25

What does the child usually do immediately after having seen High Chaparral?	Low-exposed children Number	%	High-exposed children Number	%
Goes to bed	-	-	10	55
Talks with someone	2	13	6	33
Plays with someone	11	74	1	6
Does something else	2	13	1	6
	n = 15		18	

Most of the high-exposed children go to bed immediately after having seen the film, while the majority of low-exposed play with someone. The difference is statistically significant at the 1 % level, with a chi square value of 12.93. The findings support hypothesis X a. This table should be interpreted in direct relation to Table 18, where no more than 2 children or 11 percent of the high-exposed watched only the repeat of High Chaparral, as compared with 10 children or 67 percent of the low-exposed. Because High Chaparral came on at a fairly late hour, the mothers of the high-exposed (most of whom had seen the evening broadcast first) evidently felt that the children had been up long enough and put them in bed as quickly as possible.

The above findings are reinforced by the following data:

Table 26

Has the child usually changed and washed so as to go straight to bed after the film ends?	Low-exposed children Number	%	High-exposed children Number	%
Yes	3	20	11	61
No	12	80	7	39
	n = 15		18	

According to the mothers, most of the high-exposed are gotten ready for their night's rest before they watch High Chaparral. The difference is statistically significant at the 1 % level, with a chi square value of 7.47. This question, too, must naturally be related to the fact that a much larger proportion of the high-exposed children are permitted to watch the evening broadcast.

In order to hold constant the moment of time when the child got to see the film, we developed our analysis with sole reference to the high-exposed children. We knew that 16 of the 18 children in this group watched High chaparral mostly in the evenings. In this analysis we have put their choice of behaviour in a conflict situation, aggressive - nonaggressive, in relation to what the child usually does immediately after having watched an instalment of High Chaparral in the home setting.

Hypothesis X b: High-exposed children who have chosen aggressive behaviour in a conflict situation tend more than high-exposed children who have chosen nonaggressive behaviour to go to bed immediately after the film ends.

Table 27

What were the high-exposed children told to do immediately after the film ended?	High-exposed children who went to bed immediately afterwards		High-exposed children who played or talked with someone, or did something else immediately afterwards	
	Number	%	Number	%
High- exposed children who chose aggressive behaviour	8	80	1	13
High-exposed children who chose nonaggressive behaviour	2	20	7	87
	n = 10		8	

The majority of high-exposed children who chose aggressive behaviour were told to go straight to bed after the film ended, whereas most of the high-exposed children who chose nonaggressive behaviour got to play or talk with someone, or to do something else. The difference is statistically significant at the 1 % level, with a chi square value of 5.63. These findings support hypothesis X b.

In another analysis, we related choice of behaviour (aggressive-non-aggressive) by high-exposed children to whether or not the child has usually changed for the night before watching the film.

Table 28

Had the high-exposed children changed for the night when they saw High Chaparral?	High-exposed children who had changed for the night		High-exposed children who had not changed for the night		
	Number	%	Number	%	n
High-exposed children who chose aggressive behaviour	9	82	-	-	9
High-exposed children who chose nonaggressive behaviour	2	18	7	100	9
	n = 11		7		

All the high-exposed children who chose aggressive behaviour were prepared for the night before the film went on. The majority of high-exposed children who chose nonaggressive behaviour were not. The difference is statistically significant at the 1 % level, with a chi square of 7.80. The above findings suggest that watching the programme itself need not be regarded as a decisive factor in choice of behaviour in a conflict situation by the high-exposed. In the light of these results, family handling of the programme appears to be one of the more important intervening variables.

Summary

A summary of the findings in this section presents the following picture:

The mothers of high-exposed children impose fewer restrictions on viewing than do mothers of the low-exposed. High-exposed children get to watch more TV than the low-exposed and they also watch the main newscast, Aktuellt, more often. Another intergroup difference which emerged was that the majority of high-exposed children were told to go to bed immediately after the programme ended, whereas most of the low-exposed could play with someone. To a greater extent, too, the high-exposed were prepared for the night before the programme was broadcast. This finding is explainable in large part by the fact that most of the low-exposed children could watch only the daytime repeat.

In a further breakdown of our data, we analyzed the relation between choice of behaviour (aggressive - nonaggressive) by high-exposed children in a conflict situation and their customary behaviour immediately after exposure to a film in the home setting. It turned out that the majority of high-exposed children who chose aggressive behaviour usually had to go straight to bed, while most of the similarly high-exposed who chose nonaggressive behaviour could usually play or talk with someone, or do something else.

These findings suggest that family handling of TV programmes can be regarded as an intervening variable, since this criterion apparently makes it possible to strengthen or weaken the implicit or explicit norms of a programme.

We are still deferring answers to the three questions we posed in the previous section.

V THE FAMILY'S TV HABITS

Questions concerning the family's viewing habits were the last which the mothers were called upon to answer. Earlier we showed that watching TV seven days a week was more common among the high-exposed children. Since we assumed that the children's viewing habits are dependent on those of their families, we also asked in the survey investigation how many hours per day the set was turned on in the child's home.

Hypothesis XI a: Sets are turned on more hours per day in the homes of high-exposed children than in the homes of low-exposed children.

The original response alternatives have been grouped in two categories to make the material easier to comprehend.

Table 29

How many hours per day is the set usually turned on?	Homes of low-exposed children		Homes of high-exposed children	
	Number	%	Number	%
3 hours or more	5	31	15	83
Less than 3 hours	11	69	3	17
n =	16		18	

As the table shows, most families of the high-exposed children have the set on for 3 hours or longer, while the majority in the other group usually watch TV for less than 3 hours. The difference is statistically significant at the 0.1 % level, with a chi square of 11.76. These findings support hypothesis XI a. Generally speaking it would appear that the viewing habits of children greatly reflect those of their families.

To permit comparisons with the child data, we also asked the mothers how often the family watched the Aktuellt newscast.

Hypothesis XI b: Mothers of high-exposed children tend more than mothers of low-exposed children to watch Aktuellt.

Table 30

How many days a week do you usually watch Aktuellt?	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
7 days a week	6	38	12	67
Less than 7 days a week	10	62	6	33
	n = 16		18	

A larger proportion of mothers in the high-exposed group watch Aktuellt every day. The difference is statistically significant at the 5 % level, with a chi square value of 4.18. These findings accordingly support hypothesis XI b. Once again we can observe that children's viewing reflects the family's, having regard to our findings in the previous section, where it was noted that the high-exposed children usually watched Aktuellt to a greater extent than the low-exposed.

Lastly, we asked the mothers some questions about Westerns in general and High Chaprral in particular, in an effort to measure their consumption of and attitudes to the series.

Hypothesis XI c: Mothers of high-exposed children have seen more instalments of High Chaparral than mothers of low-exposed children.

Table 31

How many instalments of High Chaparral have you seen?	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
About two or three x)	9	56	3	17
Just about all x)	7	44	15	83
	n = 16		18	

x) As mentioned earlier, this breakdown was the sampling criterion to distinguish low-exposed children from the high-exposed.

It will be seen that most mothers of high-exposed children have watched just about all the instalments, while the majority of mothers in the other group have watched an average two or three. The difference is statistically significant at the 5 % level, with a chi square value of 4.21. This result supports hypothesis XI c.

Hypothesis XI d: Mothers of high-exposed children have tended more to watch High Chaparral together with their children than mothers of low-exposed children.

Table 32

Have you seen High Chaparral together with your children?	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
Together with children	7	44	17	94
Alone or together with adults	9	56	1	6
	n = 16		18	

As the table shows, watching High Chaparral together with the children is more common among mothers of the high-exposed. The difference is significant at the 1 % level, with a chi square value of 8.19. These findings accordingly support hypothesis XI d.

Apart from serving as a validity control on the classification of low-exposed and high-exposed children, this result supports the line of reasoning we broached earlier, namely that mothers of the high-exposed are themselves more interested in Westerns than mothers of the low-exposed. It may be inferred that one of the reasons why high-exposed children watch this type of film in such high degree is because their mothers do so.

In the spring of 1968 there was a lively debate as to whether Swedish TV should broadcast Westerns or not. We asked the mothers for their opinions.

Hypothesis XI e: More mothers of high-exposed children hold that Swedish TV currently broadcasts too few Westerns as compared with mothers of low-exposed children.

Table 33

In your opinion, does Swedish TV broadcast	Mothers of low-exposed children		Mothers of high-exposed children	
	Number	%	Number	%
too many Westerns?	3	19	-	-
just enough Westerns?	11	68	9	50
too few Westerns?	2	13	9	50
	n = 16		18	

Note the much larger proportion of mothers in the high-exposed group who feel Swedish TV broadcasts too few Westerns. We merged the "too many" with the "just enough" responses and compared them with the "too few" alternative. The difference of opinion between mothers of low-exposed and high-exposed on this score is significant at the 5 % level, with a chi square value of 3.86. These findings accordingly support hypothesis XI e.

Summary

We noted in the previous section that mothers of high-exposed children held less restrictive attitudes to the development of TV tastes than mothers of the low-exposed, and also that more of the high-exposed were permitted to watch TV every day of the week. In this section we can observe that even the families of high-exposed children spend more hours every day on viewing, and that mothers of the high-exposed are themselves more interested in Westerns than mothers of the low-exposed. They had seen more instalments of High Chaparral and had also watched the films more often in the company of their children. Lastly, we can observe that a larger proportion of mothers in the high-exposed group would like Swedish TV to broadcast more Westerns.

VI MAIN SUMMARY AND DISCUSSION OF THE FINDINGS

THEORETICAL BACKGROUND

The introductory part of this report described two models - an "aggression" model and a "catharsis" model - which have been devised to explain the often disparate research findings about child reactions to scenes of violence in films and on television. According to proponents of the aggression model, films containing violence stimulate and bring out the aggressiveness found in an individual but which is normally controlled by social norms. Proponents of the catharsis model, on the other hand, hold that films containing violence reduce the individual's latent aggressiveness by virtue of his exposure to them.

It has begun to be realized, however, that the models need not be mutually exclusive: an individual can react differently at different times, and different individuals can react differently to the same film.

Later research has also demonstrated that the type of film has great bearing on the reactions. For instance, several experiments have shown that individuals tend to react more aggressively when they perceive the violence to be "justified" (under the prevailing value system, the victim of violence in this case is regarded as a repugnant person) than when they perceive it to be "unjustified".

In the discussion on films containing fictional violence, Klapper (among other investigators) has criticized what he regards as everly simple questions that have been put in mass communications research. Example: "Do films containing violence produce juvenile delinquents?" The expected answer is a plain "yes" or "no".

In Klapper's opinion, research should get away from assigning individuals a passive role, as signified by the now-classic question, "What do mass media do with the individual?", and instead assign the individual a more active

role (conscious or unconscious) by asking: "What does the individual do with mass media?"

Efforts to apply this model, known as "uses-and-gratifications", could break away from the research which aims at the direct, linear effects of films and TV, and concentrate instead on how the individual makes use of different mass media contents. The findings could then be related to the individual's social groups and also to major social systems in the larger community.

The present research report attempts to analyze the reactions of children to televised violence with reference to the approach indicated by Klapper. We do so by seeing how children use the medium, and, inasmuch as the children are small (5-6 years old), this use is related to use of the medium by the primary group (the mothers).

PRACTICAL BACKGROUND OF THE STUDY

Children who enter into the intensive study are selected from a large-scale survey investigation (covering 700 children aged 3-6) which the Audience and Programme Research Department of Sveriges Radio carried out in the spring of 1968. Included in this investigation were several questions about the Western series, "High Chaparral".

It was found that about three-fourths of the children had seen one or more instalments of the series.

SAMPLE

So as to be able to study the possible long-term effects of High Chaparral, we sampled two groups of children from the Stockholm area: those who had seen <u>all</u> or just about all of the instalments, whom we called the high-exposed children.

The sampled population consisted of 34 children and 34 mothers. 16 of the children were low-exposed and 18 high-exposed; half were boys and half were girls.

The intensive investigation consisted of an experimental part and an intensive study.

OBJECT OF THE STUDY

The purpose of the investigation is to study the possible impact of fictional violence on children, partly with reference to short-term effects and partly with reference to long-term effects, where we wanted to see how the children's "home setting" interacts with their reactions to High Chaparral.

FINDINGS

I SHORT-TERM EFFECTS

Aggressiveness

Our aim in the experimental part was to measure whether children who watch programmes containing fictional violence (High Chaparral), where the violence is "justified", are more inclined immediately afterwards to choose aggressive behaviour to resolve a conflict situation than children who have not watched the film. It turned out that we obtained no differences between children who saw or did not see the film before they were tested for aggression. Thus in this case the film caused no short-term effects as regards aggressiveness.

II LONG-TERM EFFECTS

Aggressiveness

On the other hand, a larger proportion of high-exposed children (who on average had seen all programmes in the series) than low-exposed children (who on average had seen a couple of instalments) choose aggressive behaviour in a conflict situation irrespective of whether or not they had seen the film on the testing occasion.

It thus appears that the High Chaparral series has caused certain long-term effects as regards aggressiveness.

In the subsequent analysis, however, we related this difference between choice of behaviour by low-exposed and high-exposed children to, first, individual data on the child gathered from both child and mother, and second, the child's home setting. Our findings suggest that the intergroup difference of behaviour choice should not be explained solely in terms of direct dependence on High Chaparral.

Familiarity with the series

The high-exposed children are more familiar than the low-exposed with the main characters in the series, and are also more emotionally attached to them.

Ratings

Both low-exposed and high-exposed children think a cowboy is a "nicer" person than an Indian.

Both low-exposed and high-exposed children think Indians do more shooting than cowboys.

Both low-exposed and high-exposed children think it is more right for a cowboy than for an Indian to shoot.

These findings indicate that sources of norms other than High Chaparral are also operative when children rate cowboys and Indians.

III REACTIONS OF CHILDREN TO WESTERNS

Comprehension

The majority of children in both exposure groups do not seem to comprehend so much of what is happening in the film. There was no difference between the low-exposed and high-exposed in their comprehension.

TV behaviour

Most of the high-exposed children watched High Chaparral the first time in its evening broadcast and then again in the daytime repeat, whereas the majority of low-exposed children saw the repeat only.

High-exposed children generally prefer to talk about Westerns, whereas low-exposed children prefer to talk about TV's programmes for children.

Susceptibility to fear

The majority of children in both exposure groups were reported as having been frightened by High Chaparral one or more times when they saw the programmes at home. There is no difference here between low-exposed and high-exposed children.

IV DEVELOPMENT OF TV TASTE AND TV HABITS

Attitudes of mothers to taste development

The mothers of high-exposed children impose fewer restrictions than the mothers of low-exposed children on viewing. In other words, a larger proportion of the former group hold that children can be allowed to see everything on TV and will not be harmed by it.

Children's TV habits

The high-exposed children generally get to see more on TV than the low-exposed, including such programmes as Aktuellt (the main newscast). These findings accord with the attitude reported above, namely that mothers of the high-exposed impose fewer restrictions on their children's viewing.

Handling the programme

Another intergroup difference was that the majority of high-exposed children had to go to bed immediately after having seen High Chaparral, whereas most of the low-exposed could play or talk with someone after the programme. No doubt this finding is largely explainable by the fact that a much larger proportion of the low-exposed children watched the daytime repeat only (see above). In a further breakdown of our data, however, we analyzed the relation between choice of behaviour by high-exposed children in a conflict situation (aggressive - nonaggressive) and their ordinary behaviour immediately after exposure to a programme in the home setting. It was found that most of the high-exposed children who chose aggresssive behaviour in a conflict situation usually had to go to bed immediately after the film ended, while the majority of high-exposed children who chose nonaggressive behaviour could usually play or talk with someone afterwards.

These findings suggest that handling the programme can be regarded as an intervening variable for purposes of evaluating the film's effects, inasmuch as such a criterion apparently makes it possible to strengthen or weaken the implicit or explicit norms of a programme.

V THE FAMILY'S TV HABITS

The <u>families</u> of high-exposed children watch TV more hours per day than the families of low-exposed children. This finding should be viewed as background to the data we presented earlier: a larger proportion of the high-exposed than low-exposed children got to watch TV every day of the week, and the mothers of high-exposed children held a less restrictive attitude to the development of TV taste among their children.

The <u>mothers</u> of high-exposed children are themselves more interested in Westerns than the mothers of low-exposed children. They had seen more instalments of High Chaparral and had also watched the films more often in the company of their children. Lastly, a larger proportion of mothers of high-exposed children want to see more televised Westerns.

In the discussion of our findings which follows, we should like to tie in with the three questions which were posed in connection with the object of this study:

1. Are children who watch programmes containing fictional violence (High Chaparral), where the violence is "justified", more inclined <u>immediately afterwards</u> to choose aggressive behaviour to resolve a conflict situation than children who do not watch such programmes?

> We can answer that question as follows: It was found that the children in this study were <u>not</u> influenced by the film as regards aggressiveness. We obtained no differences between the children who took the aggression test before or after the film.

2. Are children who have previously seen the series on TV many times (the high-exposed) more inclined to choose aggressive behaviour to resolve a conflict situation than children who have previously seen the series a few times (the low-exposed)?

The answer to this question is complicated. An intergroup difference of behaviour choice in a conflict situation was observable in that more of the high-exposed children chose aggressive behaviour. Our other findings, however, suggest that this difference should not be explained solely in terms of direct dependence on the High Chaparral series.

3. Does the "home setting" of high-exposed children differ from that of the low-exposed as regards the use of TV?

Several findings in this study indicate that this is indeed the case. We should like to discuss the last two questions by attempting hypothetical answers to some other questions which turned up in consequence of our findings.

1. Why did more of the high-exposed than low-exposed children choose aggressive behaviour in a conflict situation?

2. Do more of the high-exposed than low-exposed children seek out this type of film <u>of their own record</u>?

3. Why do the mothers of high-exposed children permit them to watch this type of film to such a great extent, even thoughaware that High Chaparral has sometimes frightened them?

Taking the findings of this intensive study as our starting point, we should like to set up the following research hypothesis as answers to the questions:

<u>Research hypothesis I</u>

The more frequent choice of aggressive behaviour in a conflict situation by the high-exposed children interacts with various factors. One of them is that more of these children, as compared with the low-exposed, are permitted to watch this type of programme. Another is that fewer of the high-exposed, again as compared with the low-exposed, are offered the opportunity to discuss norms and values in the programme immediately after it ends. The handling of TV programmes in the home

is an important intervening variable: for example, it was found that the majority of high-exposed children who chose aggressive behaviour had to go to bed as soon as the programme ended, whereas most of the similarly high-exposed who did not choose aggressive behaviour could play or talk with someone directly afterwards. The handling of TV programmes in the home is composed in its turn of interactions between the attitudes of parents to development of TV tastes, their viewing habits and their programme preferences.

Research hypothesis 2

The high-exposed children do not seek out this type of film of their own accord to a greater extent than low-exposed children, since the majority of children in both exposure groups did not appear to understand the film content and sometimes were also frightened by the film. The manifestation of greater interest in High Chaparral by high-exposed children is rather a function of the mother's (and family's) interest in the genre. The children learn that televised Westerns are something attractive when they observe the TV behaviour of their mothers and the rest of the family.

Research hypothesis 3

Mothers of high-exposed children permit High Chaparral to be watched more often as compared with the mothers of low-exposed children for a number of reasons. One is that the mothers of the high-exposed impose fewer restrictions on what their children can watch. Another is their conviction that the children are not harmed by televised Westerns. This attitude stems from their own more frequent viewing, and also from the more positive attitude they take to Westerns than the mothers of low-exposed children.

We should again point out that the above "answers" are research hypotheses and must not be regarded as "patent answers" to the three questions. We have based the hypotheses on data in this study, and in so doing taken account of an exceedingly small number of variables in the broad complex which goes into the reactions of children to TV films containing fictional violence.

In this study we proceeded from earlier research which has shown that the mass media behaviour of children is deeply rooted in that of their parents, and also that the norms of peers still play a small role in the broadcast media consumption of 5-6 year olds.[9)]

Rather than try to explain the more frequent choice of aggressive behaviour by high-exposed children in a conflict situation on the strength of a model which ascribes a general influencing effect to certain TV programmes, or on the strength of one which builds upon isolated individual-psychological factors, we have employed a model in this study which permits such choice to be interpreted as an embodiment and learning of the functions which TV has for parents. This is by way of saying that the problem complex also includes the interaction between those TV functions which parents consciously or unconsciously provide for the child by virtue of the contact which exists between parents and child in that which concerns the reception of TV.

We accordingly believe that research on the reactions of "normal" small children to fictional violence on TV can produce more meaningful results if the child is studied with reference to his social environment and the functions which TV has in this environment.

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9) Feilitzen, C. von and Linné, O.: The living habits and media behaviour of 3-6 year olds, Audience Research Department, Sveriges Radio, 1968